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'Knowledge and Skills Sets for Telecare Service Staff in the Context of Digital Health'

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Abstract:

Telecare services have an established place within the United Kingdom. Through employing online technologies to help mostly older people to remain at home, they are increasingly recognised as having a support role for health as well as social care. This positions telecare services within the broader realm of 'digital health'. As that position becomes more embedded, it poses questions about the nature of tasks that are (or should be) undertaken by telecare staff, and regarding new knowledge and skills that are required. This paper briefly sets out the United Kingdom policy context; references the technologies that are provided by telecare services or can be linked to them; briefly notes the impact of the COVID-19 pandemic; and proposes six knowledge and skills sets. Outcomes of the UTOPIA study undertaken in England from 2016 to 2017 are drawn upon: this study provided important information from over 100 local authority telecare managers.

Introduction:

Telecare services in the United Kingdom (UK) are estimated to serve the needs of 1.7m mainly older people (Telecare Services Association, 2017). This number indicates a modest increase over a ten year period from 'about 1.5 million elderly people' noted by Poole (2006). The level of provision of telecare is higher than in most, if not all, European countries. This is an outcome, in part, of past public sector investment in sheltered housing 'schemes' (grouped housing for older people) and its derivatives. What were called 'warden call' or 'social alarm systems' were a mandatory feature of the schemes (Fisk, 2003). Almost all the systems within such schemes are now linked to 'monitoring and response centres' and, together with links from carephones (home hub devices used by people in all kinds of housing) and their connected devices, form part of what are recognised as telecare services.

As well as the staff involved in telecare service management and administration, there are staff who are 'operational'. Operational staff undertake needs assessments and respond to 'calls' made by service users when either a trigger device (such as a worn pendant or pull cord) is physically activated; or when information is sent automatically (e.g. because of non-use following specific prompts or time-lags; or the exceeding of predetermined parameters set for some kinds of sensors).

Some of the operational staff include those who, following a call, travel to the homes of service users to assist them. The calls to a monitoring and response centre normally result in a two-way speech link being established by which the need for a response can be confirmed. Some of the circumstances are emergencies, and though that particular label was not used for services and systems in the UK. In North America the technologies are recognised as personal *emergency* response systems, PERS (or just ERS), and in Germany the services (and pendant alarms) are termed mobiler Notruf (and Notrufknopf or *emergency* call buttons). Responding to these alarms represents a longstanding primary purpose of these services. The frequency of medical needs that were dealt

with meant that the telecare services were initially located at the margin of 'digital health'. However, the increasing number of calls that relate to medical needs (because of increasing health needs of some service users) and the developing range of associated technologies (e.g. sensor devices with purposes specifically related to health), means that telecare services, having and established position within social care, are finding a more prominent position within the field of health.

Most early mobile telecare response services in the UK were established, at least in part, to provide relief (during their 'off duty' hours) for the live-in 'wardens' of sheltered housing who, during working hours, responded to alarm calls from residents' (Fisk, 2003). It follows that the knowledge and skill sets of the operational telecare staff, at least in this early period, echoed those for the wardens - in terms of the kind of care and support they gave and the ethos that went with this. The fact that wardens were mostly employed and recruited by housing agencies meant that they were seen (and saw themselves) as providing support rather than care – with job descriptions , more often than not, alluding to their roles as 'good neighbours'.

Adding to the 'mix' have been, however, different linked devices that meant operational staff had to deal with 'new' technologies that required them not just to accept and respond to calls but, increasingly, use a computerised database on which details of the service users were recorded and updated as necessary (either periodically or in relation to calls made). The data recorded included people's particular needs (including medical conditions and often medication), contact details of family members (normally first line responders), key-holders (and detail of how to gain access to the home) and of their GP (general practitioner). In essence, these requirements around data and knowledge remain the case for today's telecare services.

The nature of the required skills for telecare staff, by including the use of these 'new' technologies, meant that some staff were challenged. But, with many having been wardens (later generally known as 'scheme managers') and having been used to much of their work being dependent on installed systems and through using their own portable (usually plug-in) handsets, they were readily able to make the transition. They already had skills that included responding and giving online advice in an empathetic way to people who may have been distressed; notifying and coordinating responses to calls with, where necessary, family members, ambulance services, the police and others; documenting and updating information; and (for those undertaking responses by travelling to people's homes) giving first aid and practical support.

Excepting for first aid (where training would usually have been outsourced to voluntary bodies like the Red Cross or St John Ambulance) much of the training for the skills of operational staff was, and has remained, 'on the job'. Some training was also available from the then Centre for Sheltered Housing Studies and, more recently, by the Telecare Services Association (now TSA), formerly the Association of Social Alarm Providers). The question now arises as to whether operational staff (or, indeed, the wider telecare service workforce) in the UK is equipped in terms of its knowledge and skills for what can be regarded as the 'triple challenge' of digital health. That triple challenge relates to

a) demographic change that continues to see increasing numbers of (older) people supported at home who are potential users of online health and support services;
b) rapidly evolving and increasingly sophisticated technologies – including both 'active' devices (requiring user input to be activated – for example pendant alarms) and, increasingly,

'passive' devices which work around the end user (and require no input from them – for example movement sensors that are more concerned with monitoring); and

c) the need to adapt to a changing service context and the need to ensure people's rights are properly recognised and respected (e.g. in relation to monitoring and 'surveillance'), with their choices enhanced and their empowerment and 'agency' promoted.

Issues around the triple challenge of digital health are explored below. Six necessary skills and knowledge sets, with initial summaries of their contents, are proposed.

The Evolution of Telecare Services:

The early evolution of telecare services from 'social alarms' has been noted. Another facet of this evolution is the extent to which 'active' devices are increasingly complemented by devices (and sensors) that are 'passive'. The latter, by facilitating monitoring and surveillance, offer the possibility of providing 'all round' care for the most vulnerable of service users – the care in question being provided on a more comprehensive basis, perhaps on a 24 hour basis where necessary and involving different agencies and family carers.

The need for some service users to have 'all round' care is arguably self-evident because of pressures arising from demographic changes and, perhaps especially, the growth in numbers of frail older people, including those living with dementia. But at the same time, as noted by Pols (2014), the ability of the service user to decide when and whether to initiate a call is subverted by the use of passive technologies because, as well as being automatically activated, these can collect and send more personal data (e.g. relating to people's activities) than is strictly necessary to meet the specific need for which they were installed.

Regardless of some of the issues around such monitoring and surveillance, there is now a technological capacity that positions telecare more prominently within the wider world of digital health. It means that telecare services are poised, subject to the nature of their operational processes and the level of knowledge and skills of their staff, to become what can be recognised as tele*health* or even tele*medicine* services.

The discussion above relates especially to the first two elements of the triple challenge of digital health. With regard to knowledge and skill sets that may be required to successfully exploit new technological possibilities in a way that recognises and adjusts to the ethical concerns, it will be necessary for *all* telecare staff to have a wider and more firmly consolidated basic knowledge that relates to the technologies, health and social situations that affect many older people. The required knowledge for operational staff is in recognition of the roles of both generic devices and those which are more specific to different conditions that are now available for use within the technological systems that underpin telecare services.

Generic devices are those that are usable by a wide range of older people. They include fall detectors, medication dispensers and activity monitoring devices. Added to these are 'generic' telephony and computing devices (voice assistants, smart phones, tablets, computers and interactive TVs) the use of several of which among older people has increased during the COVID-19 pandemic (Fisk et al., 2020). Other devices relate to needs arising from specific medical conditions. They include worn activity monitoring devices (e.g. for people with epilepsy and liable to tonic-clonic

seizures i.e. seizures that, when ongoing, can lead to death); or with dementia and a tendency to 'wander'); some vital signs monitoring devices (such as glucose monitors to measure blood sugar levels for people with diabetes); and many of the multiplicity of apps that can assist people with particular needs. An example of the last of these is apps for people who have low mood or a diagnosed mental health condition by which there are readily available routes to access motivational coaching and cognitive behavioural therapy (CBT).

Taking the first and second of the triple challenges for digital health previously described (demographic pressures and the expanding range of technologies) this analysis suggests a convergence of telecare with telehealth. With regard to that convergence there is a need for some kind of accord or accommodation. The nature of the accord or accommodation will impact on both the technologies that are harnessed and used by services and the roles of professional and practice (i.e. operational) staff'. Both of these have an impact on the knowledge and skills sets that are required by staff. It follows that, as Fisk (2020) also pointed out, that the changes in technologies and in staff roles mean 'old [service] norms must be questioned and some old roles discarded or re-shaped'.

This affirmation signals a particular link between the second and third elements of the triple challenge of digital health. It reflects the influence of the technologies (with their potential for automation and the use of data in new ways - including through artificial intelligence) and necessary changes in service ethos and approaches. This 'axis' of change has been explored by Topol (2019). Notable in addition is that Topol (2020) took things further in his 'independent report' on 'preparing the healthcare workforce'.

Monitoring, Surveillance and Agency:

With the increasing capacity for monitoring and surveillance within telecare services, service approaches must offer people clear choices about how the services in question and have a role in determining which sensors they see as appropriate to their needs, where and when information derived from the sensors should be sent, and with whom it may be shared. Of course there are additional challenges that relate to people with limited cognitive capacity, but this should not detract from the need for services to endeavour to engage with *all* service users and to ensure optimal outcomes that follow inclusive and meaningful assessment processes (Woolham et al., 2019). This includes making additional effort to convey information, understand with clarity the views of service users (who may have cognitive and/or communication difficulties), work with carers where appropriate, obtain consent, and otherwise balance the rights that relate to supporting people's autonomy and optimising their personal safety.

Working closely with service users is already a key part of the role of most operational telecare staff. This takes account of and is sensitised to individual needs and to family and social contexts. But the challenge is now greater in view of the range and sophistication of many of the newer technologies and the ability of these to gather increasing quantities of often personal data. In this context, social alarm services (the predecessors of telecare services) can now be largely excluded from consideration. These are likely to become increasingly marginal as telecare services develop in the digital health context. Tele*health*, in fact, rather than telecare comes more to the fore including through the range of services of available services including mHealth (mobile health) accessed via

smartphones; and the development of different tele- disciplines such as telepsychiatry, teledermatology and tele-nursing (Fisk 2019).

The issue of people's empowerment (and agency) in these contexts is important. It follows that, having made the transition from social alarms to telecare, a further transition is necessary for telecare services that will take them more towards the heart of digital health.

Towards Transition:

The steps being taken towards the transition of telecare towards the heart of digital health may be evident in some of the outputs of the 2016-17 UTOPIA study (Using Telecare for Older People in Adult Social Care) that focused on telecare services in England (Woolham et al., 2018). This found that more than 20% of commissioned services included the use of tracking devices and door sensors (19% and 37% respectively, for monitoring people with dementia and were liable to 'wander'), medication dispensers (30%), smoke detectors / alarms (42%), bed or chair occupancy sensors or pressure mats (48%, for activity monitoring) and fall detectors (50%) as well as the 'standard' carephone and pendant alarm (53%). The health related purpose of many of the sensors that are now being used (as evidenced in the study) suggests that telecare services are at least positioned to respond to older people's healthcare as well as social care needs - albeit that a more immediate objective (e.g. for service commissioners or procurers) is more often oriented towards risk reduction.

The role of operational staff, in a context of good and often personal knowledge of the service users, was set out by Proctor et al. (2016). They noted the role as typically around 'triaging and call resolution; emotional labour' (relating to staff use of sensitive interpersonal skills at times of stress and/or anxiety for service users); and 'collaboration with lay carers; adaptation of technologies and services'. The triaging in question involves staff in having 'access to information in a timely and effective way'. Steils et al. (2019) also note that the role also involves links with family members and a variety of different agencies (often social care, health, housing, ambulance and police services). It follows that many telecare staff, regardless of their training will, through their own practice, have developed some relevant knowledge (and, potentially, skills) that relate to the work undertaken by the staff of those other bodies.

Taking a broader UK perspective, the Health and Social Care Board (2011) in Northern Ireland called for the 'development of new workforce skills and roles to support the shift towards prevention, self-care and integrated care that is well co-ordinated, integrated and at home or close to home'. The Welsh Government (2015) affirmed the need for more integrated working in community settings, asserting that 'training and development programmes ... must be reviewed to ensure digital knowledge, skills and awareness are incorporated into courses and any skills deficits are being addressed'. The position for Scotland is noted below. And for England, Wales and Northern Ireland, the NHS Confederation (2014) called for a 'more flexible, integrated workforce'.

Health Education England (hee.nhs.uk) are currently leading a 'Building a Digitally Ready Workforce Programme' the outcomes of which aim to 'increase the digital knowledge of *all* health and social care staff' [our emphasis]; and they hosted the Topol Review (noted briefly above) that, whilst focusing on the healthcare workforce in relation to England's 'digital future', affirmed the relevance

of its findings to 'the wider health and social care workforce' and the need for 'targeted support' for technology enabled care 'across health *and* social care' [our emphasis] (Topol, 2019).

Overall, however, the position for telecare services in the United Kingdom in relation to the necessary developments is such that the strongest momentum is currently evident in Scotland. This relates, in part, to the strength of moves towards health and social care integration in that country. In relation to such moves (involving both health and social care staff), Rooney et al. (2018) pointed to a key being in the 'mindset' of the policymakers and service leaders rather than the (current) structures within which they work. Furthermore, Scotland's Technology Enabled Care (TEC) Programme, launched in 2014, engaged with stakeholders in social care, health and housing and is playing a key part in helping maintain the momentum - with particular attention being given to training needs around telecare and telehealth. NHS Education for Scotland (2017) recommended that managers need to 'support a national shift to new ways of working and promote a culture of readiness for a mainstreamed future digital health and care service'.

Adding to the momentum for all four countries of the UK is the COVID-19 pandemic. This has resulted in a dramatically increased use of tele- and video-consultations and brought very rapid changes in the *modus operandi* of GP (general practitioner) and outpatient hospital services (Fisk et al., 2020). In the difficult circumstances that relate to the pandemic, it is clear that many telecare service users will have become accustomed to communicating with their health service providers remotely. Further than this, some telecare services are seizing the 'opportunity' to incorporate video-consultation within their service options (see telecareaware.com). Services that have not adapted in this way may over time, be seen by their users as having a relatively poor offering by comparison. The COVID-19 pandemic therefore creates a risk that telecare services, like social alarms, will become increasingly marginal to digital health unless they evolve, and move in the directions previously described. .

Arguably, the direction of travel is clear. It follows that questions now arise, not just around where telecare is positioned within the new world of digital health but regarding what items should be within any new set of knowledge and skills that are appropriate to that position. The context is one where the reality of work for operational telecare staff has been pointed to as *already* supporting some aspects of health. Some staff tasks (notably where concerned with monitoring and surveillance) can, in fact, be regarded as already within the realm of health in view of their reflecting the 'ethical elements of [nursing] care' that include 'attentiveness', 'competence' and 'responsibility' as put forward by Tronto (1993). And whilst the distance of the move of telecare towards or within the realm of health is not as yet clear, telecare services can generally be said to have long departed any role that could be described as 'good neighbour'.

The (other) health tasks that telecare workers undertake include prompts for medication compliance, motivating people regarding exercise and therapies (e.g. to support rehabilitation), and (in keeping with Tronto's 'attentiveness') observing and noting where needs are signalled by changes in people's mood, confusion or acuity. Added to these, for telecare staff involved in responding in person to 'calls' by travelling to people's homes (very often in relation to necessitous health related circumstances), is the administering of first aid. Such health-related tasks can, in fact, be considered as similar to those undertaken by home care staff who are, according to Koehler (2014), increasingly

expected to carry out some 'clinical' assistance. But, like telecare workers, the roles of home care staff are generally not *supposed* to include health care.

Our focus below, in setting out summary knowledge and skills sets, is one that is firmly oriented to what is both necessary and practical for operational telecare service staff. Matters such as those relating to job titles (or job configurations) are not, however, considered. Neither is the positioning of telecare services within the traditional frameworks established for social care or health – though a signal has been given above regarding the UK policy direction towards integrated services wherein telecare might be more readily accommodated.

Implications of Service Transition for Skills, Knowledge and Training:

Telecare staff have developed multi-faceted skills that necessarily include, very often based on their practical experience, some knowledge of health and medical matters. Much of the latter relates to preventative health (Proctor et al., 2016). In relation to the telecare assessments that are undertaken it can be noted that some telecare services utilise their own staff whilst others maintain staff teams that incorporate the expertise of qualified occupational therapists (Burtney, 2012; Woolham et al., 2019). There is, therefore, a clear signal for telecare in relation to more integrated service approaches that include objectives that relate to both social care and health (Skills for Care, 2014). In addition, the nature of the interpersonal and triaging skills that are put into practice by telecare staff are often informed by health related knowledge - as signalled by Proctor et al. (2016).

Finally, it needs to be considered that telecare services are not only *providers* but in some cases are increasingly responding to people who seek to purchase (technologies and) services *for themselves*. This means that there are telecare services that are both proactive in relation to the needs of people with health and social care needs; and reactive or responsive to the choices of consumers who may perceive the services very differently. It is suggested that such differences call (in relation to telecare service approaches) not so much for a 'person-centred' perspective but rather a 'person' perspective that requires (as noted by Rooney et al., 2018) a more consumer oriented 'mindset'. This mindset can facilitate the promotion of agency and empowerment of service users - though tensions can occur between 'ethic of care' perspectives (espoused in the work of Tronto, 1993) and 'consumerist' service approaches. Both, of course, must be accommodated and link directly with the expectations and needs across the full range of service users.

On a more detailed level, meanwhile, there is the need for new understandings about the way that people adopt and use different digital technologies in order to access information and services – with smartphones, tablets, interactive TVs, wearables and voice assistants all being accommodated. Evidence about such matters is slowly emerging. The evidence is in some respects, however, inadequate in view of the rapidity with which some technologies are developing. All telecare staff (whether management, administrative or operational) are affected.

It follows that, in responding to the triple challenge of digital health, there is the need for the adoption and pursuit of new knowledge and workforce skill s. The listing of knowledge and skill 'sets' below captures many of these - though further work will be necessary in order to develop, refine or add to them. Further work in particular is needed to understand and address some of the emergent ethical issues in a context where consumerist service approaches can have a part to play, and where there is an imperative (explicit in the third element of the triple challenge) relating to people's

empowerment and agency. In any case the issue of monitoring and surveillance (and related matters around the use of personal data) must increasingly be brought into focus.

The adoption of the knowledge and skill sets described below as part of the foundation of future telecare services will position them to meet the triple challenge of digital health. Each of the knowledge and skill sets is also applicable to tele*health* services. That telecare and telehealth were on a convergent (or collision) course was noted above.

Six knowledge and skill sets are proposed. These, in part, build on and take forward work undertaken for Skills for Care and Development (Fisk et al., 2013) but also respond to outcomes (on training requirements) from the UTOPIA project (Woolham et al., 2018) and to the authors' knowledge of technology options both in relation to longer term service developments and as, for example, signalled in recent overviews (Barnett et al., 2019; Sixsmith et al., 2020).

These knowledge and skill sets will help telecare services to respond to the triple challenge for digital health - by assisting them to adjust their overall service perspectives; heighten what is necessary around staff awareness and the understanding of health needs (including those that relate to cognitive impairment and dementia); understand the roles of specific kinds of new technologies; and find appropriate ways to ensure that people's rights, empowerment and agency are recognised and supported.

A. Understanding the Role of Telecare Services

Understanding the role of telecare services means staff must

- know how telecare services have evolved;
- understand, in broad terms, the political, social and commercial context within which telecare services operate;
- understand the preventative role played by telecare staff (including practical and motivational support to people / service users);
- understand the 'fit' of telecare services in the wider context of health (including telehealth and telemedicine), care and housing; and
- recognise the nature of service development of telecare within telehealth.

B. Having the Right Ethos

Having the right ethos means recognising people's / service users' different health and care needs (including for those who are cognitively impaired). Telecare staff must

- understand issues around equality, inclusion, agency, choice and people's / service users' empowerment;
- have good knowledge around particular issues that may arise for people / service users (e.g. around communication) due to language or sensory impairments;
- understand how and when to engage with people's / service users' carers, family members or important other persons (including guardians);
- know the importance of consent (and its renewal) and issues around risks and people's / service users' best interests;
- understand the ethical issues around monitoring and surveillance;
- understand the importance, for many people / service users, of face-to-face contact; and
- know the importance of privacy and confidentiality (see D below).

C. Having Confidence in Digital Technology

Having confidence in digital technology means that telecare staff must be able to help and support people / service users, where appropriate. Telecare staff must

- know how people / service users use the internet to search for information (for e.g. health, education, jobs), accessing YouTube, etc., and for networking via social media;
- know how people / service users interact with technologies as part of telecare services;
- understand how telecare services may be configured and how they can operate with other support for people / service users;
- have basic digital literacy skills that include knowledge of voice assistants, computers, interactive TVs, wearables, smart phones, apps, tele- and video-communications;
- understand the necessity for taking measures that guard against cybersecurity threats (for people / service users) and fully appreciate how breaches can impact on the telecare service;
- understand the importance of interoperability (compatibility) of telecare technologies (including those owned or sourced by people / service users);
- be able to check, test, clean, install, removing or otherwise handle telecare equipment; and
- know where to find advice or guidance on the above matters.

It also means telecare staff must have a basic understanding of the way that digital technologies may, in the future, work through e.g. the use of artificial intelligence (AI); and having an awareness of agendas around smart homes, the Internet of Things and robotics.

D. Having Confidence in Data and Information

Having confidence in data and information means recognising that digital health is increasingly concerned with the gathering and use of data. Telecare staff must

- be organised and diligent with regard to data collection, recording and its interpretation (e.g. when gathered through sensors);
- know how data is used within social care and health systems (e.g. within personal or electronic health records, PHRs or EHRs);
- know the importance of privacy and confidentiality (see B above);
- understand the place of data within algorithms determined by others but which can indicate changes in people's / service users' health, behaviours and/or situations of need; and
- be able to see how the usefulness of data can be enhanced through knowledge of the person / service user or *vice versa*.

E. Respecting Regulations and Standards

Respecting regulations and standards means that telecare staff must

- understand the importance of approved regulations for telecare services and accord with requirements therein that pertain to telecare staff;
- pursue training opportunities as appropriate to ensure that they meet, within an appropriate period (that may be defined in regulations), knowledge or licensing requirements that pertain to their particular role; and
- adhere, absolutely, with guidelines for social contact and distancing with people / service users (including within their own families, social networks, et.) in relation e.g. COVID-19 or any other public health related issue.

F. Understanding Particular Conditions and Service Options

Understanding particular conditions impacting on (older) people / service users (and service options) means that telecare staff must have general and up to date knowledge of

- relatively common (and often long-term) conditions that, in addition to the frailty of the very old, impact on (older) people / service users e.g. diabetes, chronic heart failure, chronic obstructive pulmonary disease, stroke and different forms of dementia;
- the way that different technologies can help differentially in relation to such conditions;
- how assessments are undertaken (where needed) whereby different telecare service configurations may be determined for consideration with people / service users.

It also means telecare staff must

- know how services are procured (by health and care providers or by people / service users directly), provided and funded, together with, in broad terms, the contractual frameworks that apply;
- understand and be able to signpost people / service users in relation to (other) service needs or options when hardship, vulnerability (including to domestic violence or neglect) or exploitation are apparent;
- know when specialist guidance or help is needed and where to find it; and
- know when working with other agencies may be appropriate and/or necessary.

Implications for Training:

Training for telecare staff has been problematic in view of the seemingly limited time available for staff (many of whom learnt much of their work 'on the job') and the limited range of organisations offering training that is properly informed and knowledgeable about the issues alluded to in this paper.

The need for training in relation to the knowledge and skill sets is substantial. The case for such training has been strongly argued elsewhere, albeit that the context is evolving around digital health and that greater urgency now pertains. Nearly a decade ago Burtney (2012) found, in an extensive UK-wide survey of managers and commissioners regarding assistive technologies (AT, of which telecare and telehealth were recognised a part), that 45% of nearly 400 respondents considered there to be a lack of 'knowledge of AT among the social care workforce', with 81% affirming that 'knowledge of the range if AT' was 'very important'. The fact that a majority had attended training, however, provided little reassurance because most 'courses' (overall and for AT related training 'in your area') were short and rated by the respondents as poor (i.e. 51% were rated four or less out of 10). Most courses (69%) were delivered by a supplier. 'Supplier-led training', Burtney stated, 'can be rather limited, with a tendency to focus on equipment … this type of training should not be the sole mechanism for learning and development for these reasons'. This affirmation was echoed by Wigfield et al. (2012) who considered that 'supplier led training can *perhaps* [our emphasis] play an important role in supplementing local authority and other externally provided training, but should not be the sole mechanism for learning and development'.

The outcomes of the UTOPIA study (six years later, for England) have indicated that little has changed – though the different focus in this study needs to be borne in mind. It found (Woolham et al., 2018) that the main provider of 'training for telecare assessors' (45%) was 'manufacturers or suppliers' with 'on the job training' on a peer-to - peer basis (37%) second. Just 4% of the over a hundred respondents had accessed training through a college or university and only 3% were noted as leading to a formal qualification of any kind.

Notable from the UTOPIA survey outputs, in addition, was the finding that most training was of extremely short duration, with just under a quarter of what was provided being completed between

a half and one working day. Unsurprisingly, telecare training was among the suggested 'important priority areas' to which resources should be assigned. This was pointed to in recognition of the study's main conclusion that 'suboptimal outcomes from [the use of] telecare may be linked to how telecare is adopted and used' with this, in turn, being 'influenced by staff training, telecare availability and a failure to regard telecare as a complex intervention' (Woolham et al, 2019).

Conclusion:

This paper has provided a pointer to the position of telecare services at a time of rapid developments in the field of digital health. A triple challenge of digital health was posited – relating to demographic change, technological developments and necessary changes to the ethos and approaches of telecare services. The paper has signalled how telecare is currently positioned and the need for telecare service transitions to be made to or in the direction of tele*health* in a context where people are increasingly turning to new technologies in order to access information, services and social networks.

The paper also draws attention to role of operational telecare staff in relation to health. New knowledge and workforce skills have been summarised. Through providing these, the intention is to strengthen the position of telecare staff within the world of digital health; and to facilitate *their* transition to responsible, more health oriented working roles within what might be termed 'advanced telecare' or 'telehealth' services. Within these, and with the requirements signalled in the knowledge and skill sets being attained, operational staff will be better equipped to deliver on some of the key elements of what are or must be emergent telecare service frameworks that are very different from those that have been maintained by telecare services in the twentieth century. In so doing an important step will be made to address and improve on the 'sub-optimality' of outcomes for telecare services (as noted by Woolham et al, 2019).

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Note on Funding:

The UTOPIA study was supported by the National Institute for Health Research/School for Social Care Research (grant number C088/T15-011/KCLJW-p89). The views expressed are those of the authors and not necessarily those of the NIHR School for social care research, NIHR or the UK Department of Health and Social Care.